

CLAIMS

What is claimed is:

1. A side airbag device for use in a vehicle having a forward end, a rearward end and a pair of sides disposed therebetween, comprising:

an inflatable cushion for deployment from an unexpanded state to an expanded state, said inflatable cushion being configured to traverse a portion one of the pair of sides of the vehicle in said expanded state, said inflatable cushion comprising an inflation opening, a fixed portion and a deploying edge, said deploying edge comprising a majority of a periphery of said inflatable cushion;

an inflator for inflating said inflatable cushion;

wherein said inflatable cushion is folded in a manner that causes said deploying edge to deploy as a first leading edge as said inflatable cushion is inflated to said expanded state by said inflator.

2. The side airbag device as in claim 1, wherein the inflatable cushion is configured to be positioned behind a headliner of the vehicle wherein the inflatable cushion is in said unexpanded state.

3. The side airbag device as in claim 1, further comprising a forward tethering member for securing a portion of said inflatable cushion to the forward end of the vehicle and a forward tethering member for securing another portion of said inflatable cushion to the rearward end of the vehicle.

4. The side airbag device as in claim 1, wherein said deploying edge of said inflatable cushion provides a portion of an exterior configuration of the inflatable cushion when it is in said unexpanded state.

5. The side airbag device as in claim 2, wherein said deploying edge of said inflatable cushion provides a portion of an exterior configuration of the inflatable cushion when it is in said unexpanded state.
6. The side airbag device as in claim 5, wherein said deploying edge of said inflatable cushion is the first portion of the inflatable cushion to deploy around the headliner as the inflatable cushion is inflated by said inflator.
7. The side airbag device as in claim 1, wherein said inflatable cushion is folded by a machine wherein said inflatable cushion is in said unexpanded state.
8. The side airbag device as in claim 7, wherein the folded inflatable cushion comprises a securement portion that extends away from the folded inflatable cushion, said securement portion comprises said fixed portion and is configured for securement to the vehicle.
9. A method for folding an inflatable cushion of a side airbag device, comprising:
 - providing a securement end of said inflatable cushion;
 - creating a first fold at a first position away from said securement end, said first fold and said securement end defining one side of the folded inflatable cushion;
 - positioning a traversing portion of said inflatable cushion away from said first fold, said traversing portion defining another side of the folded inflatable cushion;
 - creating a plurality of folds from said traversing portion back towards said first fold;
 - positioning an end portion of said inflatable cushion about said plurality of folds, said end portion defining another two sides of the folded inflatable cushion, wherein said end portion is the first portion of said inflatable cushion to deploy when the inflatable cushion is inflated.

10. The method as in claim 9, wherein said securement end has a plurality of securement features for facilitating the securement of said inflatable cushion.

11. The method as in claim 9, wherein said side air bag device is installed in a vehicle having a roof rail and a headliner, wherein said inflatable cushion is folded to be received within an area defined by the roof rail and the headliner.

12. The method as in claim 11, wherein said end portion is configured to be adjacent to the headliner.

13. The method as in claim 11, wherein said traversing portion is configured to be adjacent to the roof rail.

14. The method as in claim 9, wherein said traversing portion is configured to be adjacent to the roof rail.

15. The method as in claim 9, wherein said inflatable cushion is folded by a machine.

16. A method for folding an inflatable cushion of a side airbag device, comprising:

providing a securement end of said inflatable cushion;

positioning a traversing portion of said inflatable cushion away from said securement end, said traversing portion defining a side of the folded inflatable cushion;

creating a plurality of folds from said traversing portion back towards said securement end;

positioning an end portion of said inflatable cushion about said plurality of folds, said end portion defining two sides of the folded inflatable cushion, wherein said end portion is the first portion of said inflatable cushion to deploy when the inflatable cushion is inflated.

17. The method as in claim 16, wherein said securement end has a plurality of securement features for facilitating the securement of said inflatable cushion.

18. The method as in claim 16, wherein said side air bag device is installed in a vehicle having a roof rail and a headliner, wherein said inflatable cushion is folded to be received within an area defined by the roof rail and the headliner and said end portion is configured to be adjacent to the headliner.

19. The method as in claim 18, wherein said traversing portion is configured to be adjacent to the roof rail.